

## **SCHEME FOR COMPENSATORY AFFORESTATION**

**In lieu of Diversion of 4.032 ha of Forest land  
against Kalinga Institute of Social Sciences,  
Bhubaneswar**

**(Private Non Forest land selected for  
Compensatory Afforestation – 4.172 Ha)**

**Block Plantation: 4.172 Ha**

  
By Divisional Forest Officer  
Koraput Division.



## SCHEME FOR COMPENSATORY AFFORESTATION

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### 1. Introduction:

The instant project for which this Compensatory Afforestation scheme is being prepared relates to establishment and functioning of KISS (Kalinga Institute of Social Sciences) founded by Dr. Achyuta Samanta in the year 1993. This organization aims at developing the deprived sections of the society to meet the problems behind sluggish pace of transformation and bring them into mainstream society. Initially 125 poor tribal children were inducted in a rented house to start with their vision towards education and outer world beyond their place of living. Today it stands as a unique model of empowerment for more than 20,000 tribal children and at present KISS is the largest residential Educational Institution for the under-privileged tribal children and youth in the world providing free education from Standard-I to Post Graduation (PG) with Vocational and extracurricular activities including sports in a state of the art manner. Lodging, Boarding, Clothing, Medical Aid and Study materials etc. are being provided absolutely free of cost. KISS students have excelled in academics, vocational activities and earned recognition in sports in national and international level.

KISS has been declared as a Deemed University under section 3 of the UGC Act, 1956. The students of KISS have also joined the IITs, NITs, IIMs and other organization of repute. They have also excelled in Olympics, ASIAD, Commonwealth, South Asian Federation games etc.

For the purpose of this establishment, an area of about 9.961 Acre or 4.032 Ha which is recorded as Chhota Jungle Revenue land, needs to be regularized under Forest Conservation Act, 1980. In view of the projected expansion of KISS to accommodate 27000 students by 2018-19 it is required to have suitable infrastructures like buildings, playgrounds etc. in the Khordha district, Bhubaneswar Tahasil, Pathargadia Village, within the jurisdiction of the Chandaka Wildlife Division, Bhubaneswar. Since the user agency has its own Non-Forest Land in the District of Koraput as the KISS: Dangar-3, an equivalent area of Non Forest land for the purpose of CA Scheme has been selected in lieu of the Revenue Forest Land as indicated in the above paragraph.

### 2. Details of Non Forest land allotted for Compensatory afforestation:

In the instant project, private land under the ownership of KISS, C/o Sri Rabindra Nath Dash, Secretary, KISS in the village Panchhada of Laxmipur Tahasil in the district of Koraput had been proposed for the purpose of Compensatory Afforestation over an area of 10.310 Acre (4.172ha) in lieu of diversion of 4.032ha of Jungle kisam Revenue land as mentioned above. The following documents are enclosed to establish the authenticity of the land offered by the user agency.

1. Letter No. 883 dated 05.02.2019 of Secretary, KISS addressed to the DFO, Koraput.
2. RoR of the land offered for Compensatory Afforestation
3. Letter No. 367 dated 12.02.2019 of the Tahasildar, Laxmipur addressed to the Secretary, KISS indicating that the land is free from encroachment
4. Non-Incumbency Certificate relating to the Offered Land

The land details of Non Forest area selected and allotted for compensatory afforestation is as follows.

District	: Koraput;
Tahasil	: Laxmipur.
Village	: Panchada
Name of Forest Division	: Koraput; Range: Laxmipur



**Land Schedule:**

Name of the Tenant	Village	Plot No.	Kissam	Total Plot Area in Ac.	Area taken in Ac. For CA	Remark
Land of KISS, C/o R.N.Dash	Panchhada	381(part)	Dongar-3	3.360	3.310	
		542(part)	Dongar-3	4.610	4.310	
		381/1102(part)	Dongar-3	3.360	2.690	
	Total			11.330	10.310 or say 4.172ha	

Area to be afforested: 4.172 ha

**GPS Location: The GPS location and Map of the CA land is enclosed is Annexure-1A.**

### 3. Description of Area

The land proposed by KISS for the purpose of Compensatory Afforestation comes within Panchhada Village in Laxmipur Tahasil of Koraput District. The extent of CA land comes to 10.310 Acre or 4.172 Ha as per Table given above (KML file of the same is enclosed in a CD). The said area has been duly verified by FRO, Laxmipur, ACF, Koraput and DFO, Koraput Division. The Site Inspection Report indicates suitability of the area for taking up **Block plantation @1600 no of seedlings with 1year & 6 months old** per ha which are indigenous and coming up well in the said area suitability Certificate is enclosed is Annexure-1B.

It is to mention that the Compensatory Afforestation area given by KISS spread in two patches under plot no 542(part), 381(part) and 381/110 (part). In between these two patches there is a road given by KISS to facilitate movement and transportation of planting materials by Govt Forest officials to take up Compensatory Afforestation in the said area. The CA land area before plantation will be provided with Barbed wire Fencing so as to keep the said area intact without any interference of whatever kind it may be. The connecting road portion between these two patches of CA land comes within the following Khata no and Plot no which also belong to KISS. **Necessary affidavit for sparing of this CA land belonging to KISS is furnished in Annexure-II.** The same will be mutated in favor of Forest Department for declaration of the same as PF /RF as the case may be as per stipulations of MoEF & CC, Govt. of India. The ROR of the same is enclosed in Annexure-III.

Name of the Tenant	Village	Plot No.	Kissam	Total Plot Area in Ac.	Area taken left for Road	Remark
Land of KISS, C/o R.N.Dash	Panchhada	542(part)	Dongar-3	4.610	0.300	4.310acre has been taken for CA and balance 0.300 acre is given for road
	Total			4.610acre	0.300 acre	



**Soil:** The land is having a good soil depth to bear good and healthy vegetation. Soil is Red loamy with gravels. There is no remarkable erosion.

**Topography:** The land is with mixed topography of Plains with gently slope. The altitude of plains is about 360 MSL where as the highest hillock is of 420 MSL.

**Climate:** The area experiences a tropical climate. The average rainfall is 1400mm. Summer is from March to June. The South west monsoon brings usual rain and most of the rainfall receives within July to October. Depression in Bay of Bengal brings wide spread rainfall to this region.

**Vegetation:** The site is present with vegetation like small trees of Acacia-15 nos., Ficus-(Dimiri)-2 nos., Cashew-4 nos., Mango-1 no. and Eucalyptus-7 Nos.

#### **Biotic Interference.**

Since the area belongs to private Ownership, there is no biotic interference in the area. However after plantation, the area to be covered up with plantation of promising indigenous species with Birbed wire fencing around the periphery of the plantation area for the purpose of better management to ensure better protection as per approved cost norm of 2018 by PCCF, Odisha and the area will gain vigorous density and to be maintained up to 10 years. Here it is to mention that though the approved cost norm for Block Plantation contains fencing by Bamboo, in addition to the above Birbed wire fencing is being provided for better protection of the plantation which is also as per approved Cost Norm 2018 of PCCF, Odisha.

**Villages surrounding the area.** The Land is not surrounded by any village. However, there are small hamlet namely – Nuaguda, Phulgachpadar and Tringakhhol at an aerial distance of about 1km from the periphery of the plot No. 542 located in the revenue village – Panchada. The population in those hamlet village is given below. There is no other village / hamlet in the vicinity of the project area within an aerial distance of 2 km.

Name	No. of House Hold	Total Population	Male	Female	SC	ST	Others
(Nuaguda) Hamlet in Panchada revenue village.	51	205	104	101	3	202	-
(Phulgachpadar) Hamlet in Panchada revenue village	10	45	29	16	-	18	27
(Tringakhhol) Hamlet in Panchada revenue village	18	67	41	26	-	67	-

The population is mainly ST. (90%), There is availability of labour for any forestry operation. They will be benefitted by way of engagement for a period of ten years for this plantation and maintenance. This will improve their Socio-Economic condition and the ecology of the locality will also be improved.

#### **4. Plantation Model:-**

It is proposed to take up plantation in Block plantation mode



- i. **Block Plantation @1600 plants per hectare with 1 year and 6 months old seedlings over 4.172 ha or 10.310 Acre.**

#### 4. Schedule of Plantation Programme:-

As the area is in two continues patches it is proposed to take up the plantation work in the same year and subsequent maintenance up to 10 years as per approved cost norm. The planting details are summarized below.

Sl No	Parameters / description	Description	
1	Model	Block Plantation (Normal Mode)	Remark
2	No of Plants per Hectare	1600 no	Approved cost norm is at Annexure-IV-
3	Total area to be planted in Hectare	4.172	
4	Total number of Plants to be planted.	6675	
5	Total periphery of the CA land area	2010 Rmt	
6	Spacing to be adopted	2.5mx 2.5m	
7	Fencing required @ Rs.668/- X 2010 Rmt (Barbed Wire Fencing)		Approved cost norm is at Annexure -V
8	Wage Rate	Rs. 280/-	

The year wise Expenditure approved cost norm is as furnished below.

Year	Block Plantation for 1year and 6month old seedlings	
	Rate in Rs	For Area 4.172 ha in Lakh Rs
Previous year		
0 <sup>th</sup>	73420	306308
1 <sup>st</sup> Yr	50093	208988
2 <sup>nd</sup> Yr	31423	131097
3 <sup>rd</sup> Yr	18354	76573
4 <sup>th</sup> Yr	5292	22078
5 <sup>th</sup> Yr	5292	22078
6 <sup>th</sup> Yr	5292	22078
7 <sup>th</sup> Yr	5292	22078
8 <sup>th</sup> Yr	5292	22078
9 <sup>th</sup> yr	5292	22078
10 <sup>th</sup> Yr	5292	22078
Total	210334/-	877513/-

#### 5. Technical details:-

**A. General:** The plantation will be taken up in single mode as stated above i.e. Block Plantation mode. The Block plantation 4.172 ha will be covered which includes gentle plain land and moderately slopy areas.

**B. Spacing:** The plant density proposed for planting is @1600 plants per ha. The spacing is 2.5mX2.5m which is generally adopted in this tract. It is suggested to have the line of planting along the contour and plant to plant in adjacent row is staggered.

This will reduce the runoff and encourage percolation of water and enrichment of vegetation.



**C. Choice of Species:** The suitable species for the site as indicated from the present vegetation is preferable drought hardy and pioneer species as per plant succession. Mostly indigenous species will be planted up. In the plain / moderate slope species suggested are

1. *Azadirachta indica* (neema)
2. *Artocarpus hetrophylla*.
3. *Bombax ceiba* (Simili)
4. *Cassia fistula* (Sunari)
5. *Dendrocalamus strictus*. (Baunsha)
6. *Gmelina arborea* ( Gambhari )
7. *Mangifera indica* (Aamba)
8. *Peltiferum feroenium* (Radha chuda)
9. *Phyllanthus emblica* (Anla)
10. *Pongamia pinnata* (karanja)
11. *Samania saman* (bada Chakunda)
12. *Syzygium cumini* (Jamun)
13. *Tamarindus indica* (Tentuli)
14. *Terminalia tomentosa* (Asan)
15. *Ziziphus mauritiana* (Bara koli)
16. *Bauhinia vahlii* (Siali)
17. *Simaruba glauca* (Simaruba)
18. *Tectona grandish* (Saguan) etc.

#### **D. Plantation Method**

##### **D(i) Alignment, stacking and Pitting.**

Alignment and stacking will be taken up in the month of January. Pits of size 30 cm x 30cm x 30cm are to be dugout with a spacing of 2.5mt x 2.5mt @1600 plants per hectare.

##### **D(ii) Planting**

Plantation will be done after first regular shower of monsoon and to be completed within a week. Basal dose of NPK/DAP fertilizer @50gm per plant to be given. Utmost care is to be taken to apply insecticides @5gm per pit. Casualty replacement is to be taken up during 1st year of plantation just after one month of planting. 10% causality replacement is also suggested during 2nd Year.

##### **D(iii) Weeding, Soil working and Application of Fertilizer.**

Post planting operation is most vital in success of any planting programme. It is proposed to carry out two weeding during first year. Preferable Strip Weeding along the contour will be taken up. One weeding and soil working has to be done in second year and third year of plantation. Application of 50gms of NPK/DAP to be added to the soil per plant at the time of soil working during rains during 1st & 2nd year of plantation. During second weeding, provision of Half Moon trench is suggested. This will also be repeated during 2<sup>nd</sup> year also. The design is furnished below.



T : Half moon trench

P: Plant position.

Indicates slope direction.



**D(iv) Application of insecticide:**

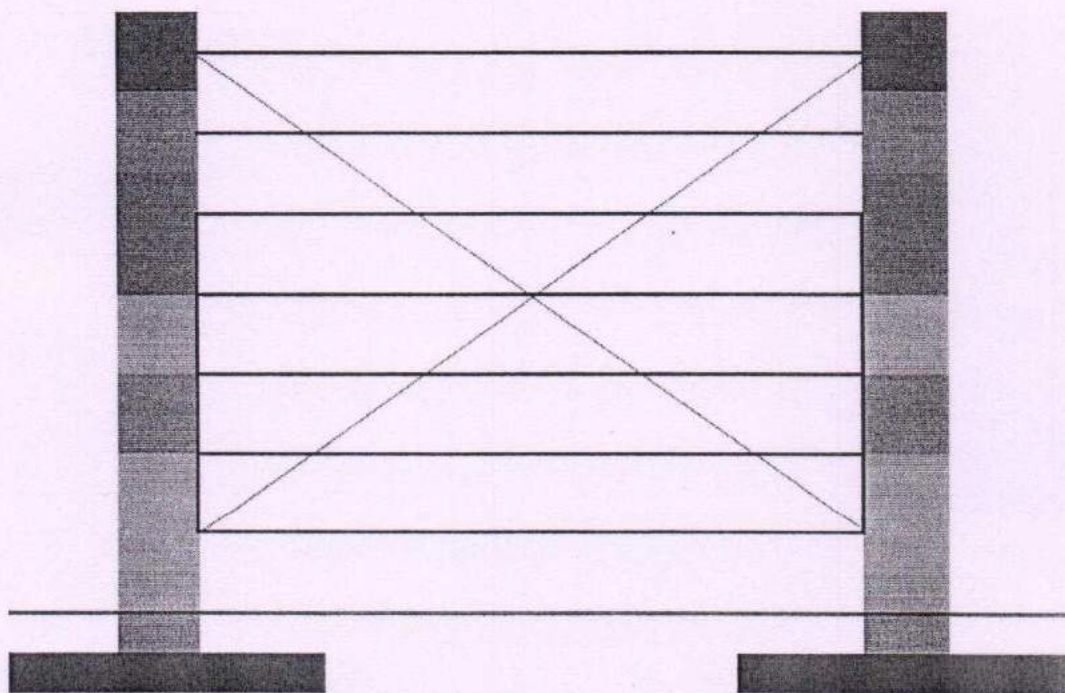
To prevent infestation of planted seedlings with diseases due to influx of insects and pests into the area, it is required to apply insecticides like Phorate at the time of planting. Foliar spraying of insecticide may be done if badly necessary.

**D(v) Fire line tracing and maintenance:**

Tender seedlings planted are subject to damage by ground fire. It is required to protect the plantation and forest growth from fire hazard by tracing of fire lines. Boundary of the plantation and several internal lines need to be scrapped to a width of 2mtr during February-March. The cut back materials and dry leaves along with fire lines should be separated and dumped in pits outside the plantation area.

**D(vi) Fencing.**

Barbed wire fencing is suggested along the boundary of plantations area. The model will be 02 ply Birbed wire to be used with 7 straights stands and 2 digonal stands. The birbed wire are to be fashioned with RCC pillars of size length =8ft and Buttom width 6"X6" , Top width 4"X4" and to be Reinforced width 6mm rods with proper curing and to be implemented as per the estimate approved by PCCF , Odisha for Cost Norm of 2018.



**Requirement of Birbed Wire fencing.**

- a) Periphery of Plot no 542(p) for area 4.310 Acre = 979.093 Rmt.
- b) Periphery of Plot no 381(p) + for area (3.310+2.690) Acre = 513.668 Rmt.
- c) Periphery of Plot no 381/1102(p) for area 2.690 Acre = 516.296 Rmt.
- d) Total length of the periphery to be taken up with Birbed wire fencing = 2009.057 Rmt or 2010 Rmt.
- e) Cost of Birbed Wire fencing = 2010 Rmt x Rs 668 per Rmt = Rs. 13,42,680/-

The cost estimate of Birbed wire fencing with rate of analysis is furnished in Annexure-V



**D(vii) Watch and ward:**

Watch and ward is necessary to protect the area from grazing, fire accident and other biotic interference. Necessary provisions have been made in the approved cost norm.

**E. Soil and Moisture Conservation Works:**

In order to enhance soil moisture, check run off and arrest carrying of silt in the flow water it is required to have staggered trenches/Percolation Pit along the contour, Line to line interval is to be kept at 4M or as required considering the degree of slope of the land as per the provisions available in the plantation cost norm, as the land is plain and moderately slopy.



**F. Protection (Fencing, Watch man, People's Participation etc.):**

In order to provide protection to plantation so raised, Provision for Birbed wire Fencing, watchman has been made and discussed and elaborated in approved cost norm.

**G. Proposed Monitoring Mechanism:**

Implementation of the planting programme will be monitored by the DFO, Koraput and RCCF, Koraput periodically. As other technical facilities / tools are now available at the hands of supervising authority and KML file along with Coordinates available it can be easily monitored from Satellite imagery / Google earth maps.



**SITE SPECIFIC SOIL AND MOISTURE CONSERVATION WORKS TO BE TAKEN IN THE CA AREA OUT OF THE 25 % CA COST:**


As per the geographical position of the area i.e. less than 5% slope soil moisture activities like Earthen guided bund can be erected on the lower slope (<5%) along the periphery of the CA area these bunds would be 1.5 Mtr High (Minimum) and follow a longitudinal slope of 0.2 % to 0.5%. The purpose of these bunds is to guide the runoff along a longer path to increase time of concentration and promote infiltration.

This can be laid on the border of CA land or it can be on the line where the land slope ends and pediment begins. This bund will prevent direct entry of water into other cultivable land existing nearby its and main purpose is to delay the runoff and increase the time of concentration substantially.


Its purpose is to change the direction of flow of runoff. Stone pitching on the upstream side may be necessary to prevent scouring by runoff coming to slope area. Further the guided earthen bund also provide protection to the CA Plantation sites like a cattle proof trench. The detail cost analysis is enclosed in **Annexure-VI**.

**Total cost of the project:** Total cost of the project will be Rs. 33,30,289/- (Rupees Thirty Three Lakh Thirty Thousand Two Hundred Eighty Nine) only as detailed in Annexure-VIII, which shall be payable by the user agency as per the advice of DFO, Koraput Forest Division.

- Encl: 1. Topo sheet showing CA area (Plate-A-I) is 1:50,000 Scale.  
2. Cadastral Map of the CA Land area. (Plate-A-II) is 1:50,000 Scale.  
3. KML file of the CA land (in CD).  
4. Annexure- I, 1A, 1B, II, III, IV, V, VI, VII.

  
Forest Range Officer,  
Forest Range Officer  
Laxmipur

  
Assistant Conservator of Forests  
Koraput Forest Division  
KORAPUT

  
Divisional Forest Officer  
Koraput Forest Division  
Koraput Forest Division

**Full Title of the Project:** Compensatory Afforestation,  
Kalinga Institute of Social Science, Bhubaneswar

**COUNTERSIGNED**

  
Regional Chief Conservator of Forests  
Koraput Circle, Koraput



## Annexure-IV

Cost Norm For Block plantation (@1600 Plants per Hectare)(for 1 year & 6 months)						
For ten year maintenance.						
Wage rate- @Rs280/-.						
Sl. No	Item of Work	Preferable Period of Execution	Person days	Labour cost @Rs 280/- per day	Material (Rs)	Total (Rs)
<b>Previous year (Advance work) Nursery Raising</b>						
1	Nursery Cost (18 month old seedling)@Rs 34.84/-part(Rs 8.68 to be released) for 1760 seedling	Nov-Mar	44	12320	2956.80	15276.80
	<b>Total</b>		44	12320	2956.80	15276.80
2	Monitoring & Supervision charges 5% of the cost					763.80
	<b>Grand Total</b>		44	12320	2956.80	16041
<b>0<sup>th</sup> Year (Advance Work)</b>						
3	Survey, Demarcation and Pillar Posting,	Nov / Dec	2	560	0	560
4	Site Preparation	Nov / Dec	12	3360	0	3360
5	Alignment & Stacking of pits.	Jan / Feb	2	560	0	560
6	Digging of pits (30cm cube)	Feb / March	40	11200	0	11200
7	Nursery Cost (18 month old seedling) Part@34.84/seedling ,Part Rs 22.14for 1760seedlings (1600+160)	Apr-Mar	111.67	31267.60	7698.80	38966.40
	<b>S.Total</b>		167.67	46947.60	7698.80	54646.40
8	Monitoring & Supervision charges 5% of the cost					2732.32
	<b>G.Total</b>		167.67	46947.60	7698.80	57379
<b>1<sup>st</sup> Year / Planting Year</b>						
9	Nursery Cost (18 month old seedling) Balance @4.02 for 1760 seedling	Apr-June	22	6160	915.20	7075.20
10	<b>Fencing</b> For an average of 250meter /ha@Rs 76.80/- per meter for bamboo twings and bamboo thron fencing	May/June	38	10640	8560	19200
11	Carriage and planting Casualty replacement and application og insecticide, manure etc.	July / Aug	21	5880	0	5880
12	Cost of Insecticide & Fertilizer. (a) NPK @50gm/ plant as basal dose=80kg @Rs24/- per Kg : Rs1920/- (b) Urea 70gm per plantin two subsequent doses@6/- per kgRs672/- (c ) Granullar insecticides (Themet , Forest, etc @5gm/ plant@Rs80/ kg=Rs640/-			0	3232	3232
13	1 <sup>st</sup> Weeding (Complete weeding)	Aug / Sept	7	1960	0	1960
14	Manuring of urea 35gm/ plant	Aug / Sept	5	1400	0	1400
15	2 <sup>nd</sup> Weeding (Complete weeding)	Sept / Oct	5	1400	0	1400
16	Soil Working(50cm Radius around plant) maureing 35g/ plant		7	1960	0	1960








37	Fire line tracing (2m Wide fire line over 400m long) & cultural operation	Feb / March	3	840	0	840
38	Watch & Ward	April / March	15	4200	0	4200
	<b>Sub Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5040</b>
39	Monitoring & Supervision charges 5% of the cost					252
	<b>G.Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5292</b>
<b>5<sup>th</sup> Year maintenance</b>						
40	Fire line tracing (2m Wide fire line over 400m long) & cultural operation	Feb / March	3	840	0	840
41	Watch & Ward	April / March	15	4200	0	4200
	<b>Sub Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5040</b>
42	Monitoring & Supervision charges 5% of the cost					252
	<b>G.Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5292</b>
<b>6th Year maintenance</b>						
43	Fire line tracing (2m Wide fire line over 400m long) & cultural operation	Feb / March	3	840	0	840
44	Watch & Ward	April / March	15	4200	0	4200
	<b>Sub Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5040</b>
45	Monitoring & Supervision charges 5% of the cost					252
	<b>G.Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5292</b>
<b>7th Year maintenance</b>						
46	Fire line tracing (2m Wide fire line over 400m long) & cultural operation	Feb / March	3	840	0	840
47	Watch & Ward	April / March	15	4200	0	4200
	<b>Sub Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5040</b>
48	Monitoring & Supervision charges 5% of the cost					252
	<b>G.Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5292</b>
<b>8th Year maintenance</b>						
49	Fire line tracing (2m Wide fire line over 400m long) & cultural operation	Feb / March	3	840	0	840
50	Watch & Ward	April / March	15	4200	0	4200
	<b>Sub Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5040</b>
51	Monitoring & Supervision charges 5% of the cost					252
	<b>G.Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5292</b>
<b>9th Year maintenance</b>						
52	Fire line tracing (2m Wide fire line over 400m long) & cultural operation	Feb / March	3	840	0	840
53	Watch & Ward	April / March	15	4200	0	4200



	<b>Sub Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5040</b>
54	Monitoring & Supervision charges 5% of the cost					252
	<b>G.Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5292</b>
<b>10th Year maintenance</b>						
55	Fire line tracing (2m Wide fire line over 400m long) & cultural operation	Feb / March	3	840	0	840
56	Watch & Ward	April / March	15	4200	0	4200
	<b>Sub Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5040</b>
57	Monitoring & Supervision charges 5% of the cost					252
	<b>G.Total</b>		<b>18</b>	<b>5040</b>	<b>0</b>	<b>5292</b>

<b>ABSTRACT</b>					
Year	Person days	Labour Component	Material Component	Monitoring & Supervision charges 5% of total cost	Total
Previous year	44	12320	2957	764	16041
0th Year	167.67	46948	7699	2732	57379
1st Year	125	35000	12707	2385	50093
2nd Year	59	16520	13406	1496	31423
3rd year	52	14560	2920	874	18354
4th Year	18	5040	0	252	5292
5th year	18	5040	0	252	5292
6th year	18	5040	0	252	5292
7th year	18	5040	0	252	5292
8th year	18	5040	0	252	5292
9th year	18	5040	0	252	5292
10th year	18	5040	0	252	5292
<b>Total</b>	<b>573.67</b>	<b>160628</b>	<b>39689</b>	<b>10015</b>	<b>210334</b>

  
Forest Range Officer,  
LAXIMPUR RANGE.

  
Asst. Conservator of Forests  
Koraput Forest Division  
KORAPUT

  
Divisional Forest Officer  
Koraput Forest Division



## Annexure-V

### ESTIMATE FOR BARBED WIRE FENCING

- 01). 02 ply barbed wire (5 Rmt per kg)  
 7 straight strand x 1000 Mt = 7000Mt  
 2 Diagonal strand =  $2 \times \sqrt{(6.5')^2 + (8.2')^2} = 2 \times 10.50 \text{ ft}$   
 = 21.00 ft x 400 nos = 8400 ft or = 2560Mt  
 = 9560Mt
- Requirement of Barbed wire per Km  
 Cost per KM = 9560/5 = 1912 Kg @ Rs.80/Kg Rs.1,52,960.00
- 02). Construction of RCC pillars of size-  
 Length—8ft, Bottom width 6"x6", Top width-4"x4"  
 Reinforced with 6mm rods with proper curing
- $$\left\{ \frac{8' \times 6'' + 4''}{2} \times \frac{6'' + 4''}{2} \right\} \times 6'' + 4'' = 1.34 \text{ cft or } 0.038 \text{ cum}$$
- i). Cost of c.c. work 1:2:4 = 0.038 cum @ 5262.57/cum = 199.98  
 ii). Cost of rod including cutting, bending & binding  
 0.038 x 0.9 qtl = 0.0342 qtl @ Rs. 10,595.80/qtl. = 362.38  
 iv). Contingency (15%) including = 81.05  
 Curing, stacking, provision of hooks etc.
- Rs 643.41 or Rs. 644/
- Requirement of pillars per KM-  
 Spacing = 2.5mt x 2.5mt  
 Requirement = 1000mt / 2.5mt = 400  
 Strut pillar in every 10<sup>th</sup> pillar = (400/10) x 2 = 80  
 480 Nos
- Cost of pillars per Kilometer = 480 @ 644/- Rs.3,09,120.00
- 03). Fitting fixing of RCC pillars in position with hbg metal (4cm) in C.M (1:4:8)  
 i). Digging of pits 1.5' x 1.5' x 1.5' = 3.375 cft/pit  
 for 480 pits, 480 x 3.375 = 1620 cft or 45.86 cum @ Rs. 12,040/100cum = 5521.54  
 ii). Fixing of pillars with 4cm hbg metals in C.M 1:4:8  
 pit size - 1.5' x 1.5' x 1.5' = 3.375 cft  
 Deduct 1/3<sup>rd</sup> of butt of pillar i.e. 3.375/3 = (-) 1.125 cft  
 Total c.c. work per pillar = 2.25cft
- For 480 pillars = 480 x 2.25 = 1080cft or 30.577 cum @ Rs. 3629.46/cum Rs.1,10,978.00
- 04). Labour for straightening the barbed wire and fixing & clipping with pillars  
 70M.d per km @ 280/- = Rs.19,600.00
- 05). Carriage of Barbed wire & pillars to work site  
 @Rs.1000/tl. and cost of loading & unloading within 5 km distance  
 Approximately 10 tld @ 800/tld = Rs.18,000.00
- 06). Provision of one Iron Gate of size (4' x 5') on LS = Rs. 7,500.00
- Total = Rs.6,23,680.00  
 Labour Cess 1% = Rs. 6,237.00  
 Expenditure per 1 km of barbed wire fencing = Rs.6,29,917.00  
 Or say, Rs.629 91/- or Rs.630/- per meter



07). Expenditure towards maintenance for 3 years (3<sup>rd</sup>, 6<sup>th</sup> & 9<sup>th</sup> year)

@ 2% of cost per rkm =  $3 \times 2\% \times \text{Rs. } 6,29,917/-$

= Rs. 37,795.00 ✓

Expenditure per 1 km of barbed wire fencing including maintenance

= Rs. 6,67,712.00 ✓

So, expenditure per running meter for fencing = Rs. 667.71/Mtr. or say Rs. 668/-Mtr.

(Rupees Six hundred sixty eight) only

  
Forest Range Officer,  
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Asst. Conservator of Forests,  
Koraput Forest Division  
K O R A P U T

  
Divisional Forest Officer  
Koraput Forest Division



## Annexure-VI

DETAIL ESTIMATE FOR GRADED EARTHEN BUND OF (1 Rmt)

Sl. No	Item of work	Unit	Rate per unit	Nos.	Amount (in Rs.)	Total (in Rs.)	Remarks
1	Site Clearance, Marking etc.	LS			24.61	24.61	
2	Excavation of earth in Hard and stony earth within initial lead and lift <u>Earth work-1.5 Mt x 1.5 Mt x 1 Mt</u>	Cum	122.8	2.25	276.30	276.30	
3	Fine dressing over the slopes of the Earth work with initial lead 1.5 Mt x 1.5 Mt	Sqm	2.86	2.25	6.435	6.44	
4	Rough Granite stone dry packing apron and revetment with stone other than granite. 1.5 Mt x 1 Mt x 0.3 Mt	Cum	1261.45	0.45	567.6525	567.65	
Cost of 1 Rmt Graded Earthen Bund Total						875.00	/Rmt
for 630 Rmt						551248.43	
5	Unforeseen Item	LS				3799.57	
Or Say						5,55,048.00	

(Rupees Five Lakh Fifty Five Thousand Forty Eight)only

  
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LAKHIMPUR RANGE.

  
Asst. Conservator of Forests  
Koraput Forest Division  
KORAPUT

  
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ANALYSIS OF RATE						
Sl. No	Description	Quantity required	unit	Amount	Amount	Remarks
				Rs. P.	Rs. P.	

1	Earth work in Hard Soil or gravel mixed with stone boulder not exceeding 0.014cum in volume within 50mt initial lead and 1.5 mt initial lift including rough dressing and breaking of clod to maximum 5cm to 7cm and laying in layers not exceeding 0.3m depth for 100cum					
	Man Mulia	21.5	Nos	Each	280	6020.00
	Woman Mulia	21.5	Nos	Each	280	6020.00
						12040.00
	2% Sundrise and T & P etc.					240.80
						12280.80 /100 Cum
						12280.80 /100 Cum
	<b>Total</b>				<b>Rs. 122.81</b>	<b>/Cum</b> ✓

2	Fine dressing over the slopes of the dam or dyke with initial lead					
	Fine dressing of the earthwork					
	Man Mulia	0.01	Nos.	Each	280	2.80
	2% Sundries and T & P etc.					0.06
	Avarage Rate					<b>Total 2.86 /Sqm</b> ✓

3	Rough Granite stone dry packing in foundation, apron and revetment with stone other than granite quarried, broken and stacked including collection, stacking and transpiration					
i	Rough stone other than granite Picked up etc 1cum	1.00	Cum	Cum	281.00	281
ii	Masson Spl. class	0.17	Nos.	Each	430.00	73.10
iii	Stone packer	0.35	Nos.	Each	370.00	129.50
iv	Man mulia	0.52	Nos.	Each	280.00	145.6
v	Women mulia	0.52	Nos.	Each	280.00	145.6
vi	Man mulia (for Carrying heavy stone of 30 CM & above)	0.35	Nos.	Each	280.00	98.00
vii	Convey by Head load including all within 50 to 100 Mtr	1.00	Cum	Cum	38.00	38.00
	2% Sundries and T & P etc					910.80
						18.22
	With Conveyance per 1 Cum within 5 KM					929.02 /Cum ✓
	With Conveyance per 1 Cum within 5 KM to 10 KM	5	Cum	KM	9.2	156.40
	Royalty	1	Cum	Cum	130	46.00
						130.00
	<b>Or Say</b>				<b>Rs. 1,261.45</b>	<b>/Cum</b> ✓

#### Labour Wage Cost

Unskilled - Rs. 280/-

Skilled- Rs. 320/-

Semiskilled- Rs. 370/-

Highly Skilled- Rs. 430/-

Conveyance within 5 KM- Rs. 156.40 per Cum

Conveyance within 5 to 10 KM- Rs. 9.20 per Cum per KM

Royalty of Stone Materials- Rs.130/- per Cum

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KORAPUT


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**Annexure-VII****TOTAL COST OF THE COMPENSATORY AFFORESTATION SCHEME**

Sl. No	Area of the Site	Component	Cost for Ha/Rmt	Amount	Remarks
A1	4.172 Ha	Block Plantation.	2,10,334	8,77,513=00	CA Cost of Rs. 33,30,325/- to be deposited in Adhoc CAMPA Account. (Sl. No A1 to A3)
A2	2010 Rmt	Barbed Wire Fencing.	668/-	13,42,680=00	
Total				22,20,193=00	
A3	4.172 Ha	Soil Moisture Conservation (SMC) i.e. 25% of the CA Cost		5,55,048=00	
Total				27,75,241=00	
Add 20 % for Escalation Cost				5,55,048=00	
<b>Grand Total</b>				<b>33,30,289=00</b>	
(Rupees Thirty Three Lakh Thirty Thousand Two Hundred Eighty Nine) only					

  
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KORAPUT

  
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